Research on the Construction and Teaching Reform of "Integrated English" Course Based on the OBE (Outcome-Based Education) Concept

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ABSTRACT

The "Double Ten Thousand Plan" for first-class undergraduate courses has put forward new requirements for the quality of English major courses. "Integrated English", as a core course for senior English majors, occupies a central position in the cultivation of English professionals. This study is based on the Outcome-Based Education (OBE) concept and focuses on the training of third and fourth-year English major teacher students. It explores the curriculum construction path for "Integrated English" and proposes teaching reform measures from three key dimensions: classroom teaching content, teaching methods, and assessment strategies. The research contributes to enhancing the quality of English major curriculum construction and fostering students' professional core literacy, laying a solid foundation for their future professional development.

Keywords: OBE (outcome-based education), Integrated English, Course construction, Course reform.

1. INTRODUCTION

Curriculum teaching plays a pivotal role in shaping the development of talents within educational institutions, exerting a profound influence on overall talent cultivation (Ministry of Education, 2020). The Ministry's "Double Ten Thousand Plan" aimed at advancing first-class undergraduate programs has spurred significant progress in curriculum construction, thereby heightening the standards for English major courses. This initiative underscores the pressing need for ongoing teaching reforms, comprehensive course evaluations, and the establishment of robust teaching content and curriculum frameworks tailored to meet evolving educational demands.

However, an in-depth review of recent years' teaching practices of "Integrated English" for senior English majors highlights several critical issues. These include the insufficient emphasis on nurturing critical thinking skills during instructional processes, overreliance on singular assessment methodologies, an overly dominant role assumed by instructors, and a curriculum excessively focused on preparing students for the TEM-8 exams. These shortcomings collectively undermine the holistic development of core literacy among students pursuing English education.

To effectively address these challenges, a thorough exploration of "Integrated English" course construction and teaching reform is essential, particularly leveraging the Outcome-based Education (OBE) concept. OBE advocates for aligning teaching activities with predetermined student outcomes, thereby fostering a shift in classroom dynamics from a teacher-centered approach to one that is student-centered. This educational paradigm encourages a departure from traditional knowledge-centric teaching methods towards fostering achievement-oriented abilities among students. By actively engaging students in practical learning experiences and promoting independent learning capabilities, OBE facilitates a more enriching educational environment.

Embracing the principles of OBE in English major courses holds significant promise in enhancing students' comprehensive competencies. It equips them more effectively to navigate the complexities of professional challenges within the English education sector. This transformative approach not only enhances the overall quality of

education but also ensures that graduates are adequately prepared with critical skills required in today's competitive academic and professional landscapes. Through these initiatives, English major programs can better meet the evolving needs of both students and the broader educational community.

2. CONNOTATION AND THEORETICAL BASIS OF THE OUTCOME-BASED EDUCATION CONCEPT

2.1 Connotation of the Outcome-Based Education Concept

The Outcome-Based Education Concept (OBE concept) is an essential component of OBE, emphasizing that the design and implementation of educational activities should be oriented toward the outcomes that students can produce. Outcomes include not only the learning of knowledge, skills, and attitudes but also the ability to apply these learning outcomes in real-world situations. The OBE educational concept was first proposed by American scholar William G. Spady, who provided a comprehensive explanation of this concept in his 1994 work "Outcome-Based Education: Critical Issues and Answers." The core of OBE is to take the expected outcomes that students can ultimately achieve as the starting point and destination of educational activities (Spady, 1994). When implementing the OBE concept, teachers need to clarify the standards of student learning outcomes, design teaching activities to help students meet these standards, and use effective evaluation systems to measure whether students have truly met these standards. This educational model encourages students to actively participate in the learning process and cultivate their independent learning and problem-solving abilities.

The OBE educational concept includes five main levels: First, it firmly believes that all students have the potential to succeed, and each successful learning experience lays the foundation for further development. Second, it advocates personalized evaluation methods, where teachers set and adjust evaluation standards according to each student's uniqueness. Third, it emphasizes the importance of mastery, considering that teaching evaluation should be based on the degree of student knowledge mastery rather than simply categorizing students. Fourth, it highlights the school's performance responsibility, where the school should take primary responsibility for students' learning outcomes and provide clear, specific evaluation criteria. Finally, it insists on a competency-based educational approach, focusing on cultivating the core competencies that students need to adapt to future society, clearly listing these competencies along with corresponding cultivation requirements and related courses. This concept reflects a "student-centered" educational philosophy, aligning with societal demands for talent and emphasizing the observability, measurability, and applicability of student abilities (Chun, Guo & Wang, 2021).

Building on the OBE concept, Spady further developed the pyramid model of outcome-based education. This model divides OBE into five dimensions: exemplary implementation, two key goals, three key premises, four execution principles, and five implementation points (Zhou, Yu & Huang, 2021). Exemplary implementation refers to the need for a clear goal and framework for OBE, which should precisely define the competency standards that students should achieve in their respective fields and construct a complete system of teaching goals, course design, teaching methods, and teaching evaluation around these competency standards (Gan, 2021). The two key goals include formulating a clear blueprint for student outcomes and creating an environment and opportunities conducive to student success. The outcome blueprint should detail the knowledge system, skill levels, and value orientations that students should master upon graduation, while creating a successful environment and opportunities is crucial for achieving this blueprint. The three key premises are the belief that all students have the ability and potential to learn successfully, that the educational and teaching activities of the school have a direct impact on students' learning outcomes, and that successful learning experience will motivate students to pursue higher levels of success (Spady, 1991). The four execution principles include focusing on important educational outcomes, designing courses backwards from the final educational goals, having high expectations for all students' success, and striving to increase students' opportunities for successful learning. Specifically, the four principles are: first, clear focus, with an emphasis on important peak outcomes; second, backward design, where course and teaching design are created from the final peak outcomes downwards (Shen & Steven, 2016); third, high expectations, expecting all students to achieve success (Tam, 2014); fourth, expanded

opportunities, enhancing opportunities for successful learning. The five implementation points include clearly defining student learning outcomes, constructing a curriculum system that matches these outcomes, formulating clear teaching strategies, creating a self-referential evaluation system centered on students, and ensuring that students gradually reach the predetermined learning peaks.

2.2 Theoretical Basis of the Outcome-Based Education Concept

The OBE concept originated from the educational reform trends in the United States during the 1950s, encompassing core ideas such as educational objectives theory, competency-based education, and mastery learning.

First, educational objectives theory, a crucial component of the OBE concept, traces its development back to the 1970s in North America. At that time, some educational systems began experimenting with OBE methods to improve students' academic performance. Although the concept was not explicitly named OBE at that time, its core idea—that educational activities should be designed and implemented with the ultimate learning outcomes that students are expected to achieve in mind—was already emerging. As time progressed, the OBE concept and its practices gained widespread recognition and application globally, gradually forming a student-centered and outcome-based educational philosophy. Throughout this process, educational objectives theory was continually refined and became a central pillar of OBE theory. It emphasizes the importance of clear and measurable learning outcomes and is committed to the continuous improvement and enhancement of educational quality. Currently, educational objectives theory is widely applied in educational practice, especially in higher education. Many countries and regions are implementing OBE educational reforms to ensure that students acquire the knowledge and skills necessary to meet societal and industry demands.

Second, competency-based education (CBE), another core component of the OBE concept, emphasizes education goals based on competencies. It posits that the focus of education should be on cultivating students' comprehensive abilities to meet the needs of future society and careers. This educational philosophy breaks free from the constraints of traditional subject knowledge, focusing on students' practical skills such as technical skills, interpersonal communication skills, teamwork abilities, and problem-solving skills. CBE emphasizes personalized learning, encouraging students to choose learning paths that suit their interests and abilities to achieve personalized educational goals. Additionally, it employs flexible assessment methods, evaluating students based on their actual performance and abilities rather than relying solely on exam scores. CBE also stresses the importance of practical teaching, using hands-on activities and simulations to develop students' practical skills and problem-solving abilities. Furthermore, it is dedicated to the continuous improvement and enhancement of educational quality through regular assessment of student learning outcomes and providing feedback, continuously adjusting and optimizing the educational process.

Finally, mastery learning, another significant component of the OBE concept, focuses on ensuring that every student achieves a high level of proficiency. Unlike traditional education, which differentiates students based on their levels of academic achievement, mastery learning emphasizes the learning progress and ability enhancement of all students. To achieve this goal, the teaching process advocated by mastery learning includes two key steps: the first step is to set clear and measurable teaching objectives; the second step involves continuously cycling through teaching, formative assessment, and remedial instruction until students achieve the learning objectives. The implementation of this educational philosophy helps ensure that students not only acquire knowledge but also apply it in practice, thereby achieving true mastery. The introduction of the mastery learning philosophy in the early 1980s facilitated the establishment of the Outcomes-Based Schools Network in the United States, further promoting the widespread application and development of the OBE concept in the United States and worldwide (Shen & Steven, 2016).

3. COMPARISON BETWEEN OUTCOME-BASED EDUCATION CONCEPT AND TRADITIONAL EDUCATIONAL CONCEPT

OBE (Outcome-based Education) is an educational concept that focuses on the learning outcomes of students. It prioritizes the results that students can achieve, constituting a paradigm shift in educational philosophy and practice compared to traditional structures and methods (Tam, 2014).

"Table 1" indicates that the main differences between OBE and traditional education concepts are in goal orientation, student roles, time allocation, evaluation methods, success standards, learning methods, cooperation and competition, teaching space, and teaching effects.

Table 1. Comparison between outcome-based education concept and traditional education concept

	OBE Education Concept	Traditional Education Concept
Goal Orientation	Knowledge transmission	Practical ability cultivation
Student Roles	Passive knowledge receiver	Active learner
Time Allocation	Fixed teaching schedule	Dependent on teacher and student needs
Evaluation Methods	Exams and tests	Continuous evaluation and feedback
Success Standards	Ranking students	All students as successful learners
Learning Methods	Knowledge instillation	Student participation and practice
Cooperation and Competition	Peer competition in learning	Self-competition
Teaching Space	Classroom or fixed learning space	Online and offline
Teaching Effects	Memory and understanding of knowledge	Understanding, application, analysis, and innovation of knowledge

In traditional education, educational goals focus on knowledge transmission, ensuring that students grasp certain knowledge and information. Conversely, the outcome-based educational concept focuses more on cultivating students' practical abilities, ensuring they can achieve predetermined learning outcomes, which may include knowledge, skills, attitudes, and values. In traditional educational models, teachers are often the knowledge transmitters, and students' roles are primarily passive knowledge receivers. In contrast, in the OBE model, teachers' roles shift to learning guides and partners, and students become active learners. Traditional educational concepts usually follow fixed teaching schedules and routines, while OBE education is more flexible, with time allocation dependent on the needs of teachers and students. The implementation of OBE requires educators to clarify educational goals and design corresponding teaching activities and assessment strategies to ensure that students achieve these goals. This education model emphasizes the result-based nature, meaning every aspect of the educational process should aim towards the final learning outcomes of students. This model encourages educators to address students' personalized needs, provide differentiated teaching support, and implement formative evaluations to promote continuous student progress and ability enhancement.

Traditional education models often emphasize exams and tests, while the OBE concept emphasizes continuous evaluation and feedback. In the OBE educational model, the purpose of evaluation goes beyond simple score assessment, focusing more on understanding the students' learning process and providing personalized support and guidance. The OBE concept insists that all students have the potential for successful learning, aiming to ensure every student can achieve predetermined learning outcomes. This concept discourages ranking students into different levels but encourages creating equal learning opportunities through structured differentiation or classification, gradually guiding every student to become a successful learner (Li, Zhu, Liu & Xia, 2014)

Traditional education emphasizes knowledge instillation, while OBE education emphasizes student participation and practice. Traditional education often adopts a competitive learning environment, ranking or classifying students through a grading system, which may lead to opposition and labeling among students (Li, Zhu, Liu & Xia, 2014). OBE, on the other hand, emphasizes cooperative learning, transforming student competition into self-competition, where students continuously challenge themselves and collaborate for peak learning outcomes (Li, Zhu, Liu & Xia, 2014). In the OBE educational model, students are encouraged to develop their abilities and skills through a series of practical learning activities, emphasizing students' self-realization and ability growth, rather than mere knowledge accumulation.

Traditional education models are often confined to the classroom as a fixed learning space, while outcome-based education breaks this limitation, fully utilizing online and offline resources to create a complete learning cycle that includes pre-class preparation, in-class interaction, post-class review, and classroom practice. Compared to traditional education, which focuses on students' memory and understanding of knowledge, OBE education goes further, emphasizing the comprehensive learning process from knowledge recognition to understanding, application, analysis, and innovation.

4. CONSTRUCTION PATH OF "INTEGRATED ENGLISH" COURSE BASED ON OUTCOME-BASED EDUCATION CONCEPT

OBE (Outcome-Based Education) is a transformative approach to learning that places the learner at the heart of the educational process (Zhang, Zhang & Sun, 2020). It is designed to respond effectively to the evolving demands of society, particularly the needs of professional environments (Jiang & Wang, 2023). This educational philosophy prioritizes the outcomes of learning as its core objective, ensuring that all educational activities are geared towards achieving these outcomes, which are essential for the student's professional and personal development.

One of the primary strengths of OBE is its dynamic nature, which allows it to adapt continually to the changing requirements of the job market and societal expectations. This adaptability is crucial for fields like English education, where professionals must often update their skills and knowledge to stay relevant. By aligning educational goals with real-world needs, OBE ensures that graduates are not only well-prepared theoretically but are also ready to apply their skills practically in their respective fields.

In the context of teacher education, OBE emphasizes the development of specific competencies that are directly linked to the successful practice of teaching. These competencies include pedagogical skills, subject knowledge, and the ability to adapt teaching methods to different learning environments and student needs. This approach is particularly beneficial in cultivating educators who are capable of fostering a learning environment that is both inclusive and effective.

Under the OBE framework, curriculum design is approached with a focus on the end results of education. This reverse design process involves identifying the desired outcomes first and then developing courses and content that lead directly to these outcomes. Such a strategy ensures that every aspect of the educational process is purposeful and directly linked to the predefined objectives. It allows educators to build a curriculum that is both comprehensive and coherent, integrating various educational components into a unified whole that systematically works towards developing the core competencies of students (Tian & Liu, 2022).

The curriculum under OBE is typically divided into several key modules, each designed to address different aspects of student development:

- General Ability Course Module: This module is foundational, aimed at bolstering students' basic skills in the English language. It exposes students to a diverse array of text genres and topics, enhancing their understanding and appreciation of the language. The focus on discourse organization skills in this module helps students become more effective communicators, capable of structuring their thoughts and arguments clearly and persuasively. Additionally, integrating elements of the TEM-8 examination ensures that students are prepared for national standards of language proficiency, reinforcing their reading, translation, and writing skills.

- Professional Ability Course Module: Tailored for future English educators, this module delves deeper into the pedagogical aspects of English teaching. It covers a broad spectrum of educational strategies and engages students with advanced content that sharpens their teaching skills. Through interactive formats such as workshops, seminars, and simulated teaching scenarios, students are encouraged to apply their knowledge in practical settings, thereby gaining confidence and professional acumen. The module also fosters a deeper understanding of the theoretical underpinnings of language education, preparing students to handle various teaching challenges they might face in the classroom.

- Innovation and Expansion Course Module: This forward-thinking module is designed to extend students' capabilities beyond traditional boundaries. It focuses on developing critical thinking and problem-solving skills, which are indispensable in today's rapidly changing world (Rajan, 2020).. By promoting innovative thinking

and adaptability, this module prepares students to tackle unforeseen challenges with competence and creativity. Activities within this module encourage students to think critically about complex problems, explore alternative solutions, and apply their learning in diverse contexts. This not only enhances their academic abilities but also prepares them for leadership roles in their future careers.

5. TEACHING REFORM OF "INTEGRATED ENGLISH" COURSE BASED ON OUTCOME-BASED EDUCATION CONCEPT

The core of the "Integrated English" course reform is to innovate teaching methods and clarify the central position of students in teaching activities. During the entire teaching process, clearly defined specific outcomes by teachers can make the purpose of teaching and learning more explicit (Rao, 2020). Based on the OBE concept, foreign language teaching follows four basic principles to ensure the effectiveness and pertinence of teaching activities. First, clear focus. The course design and teaching content should clearly point to the learning outcomes that students can ultimately achieve, guiding students to align their learning goals with these outcomes. Teachers need to clearly explain the learning goals and help students develop the necessary knowledge, skills, and qualities to achieve the expected learning outcomes. Second, expanded opportunities. Course design and teaching should fully consider students' individual differences, ensuring that every student has the opportunity in terms of time and resources to achieve learning outcomes. Teachers should adopt flexible teaching strategies to meet students' personalized needs and provide opportunities for students to demonstrate their acquired knowledge and skills. Third, raised expectations. Teachers should raise expectations for students' learning, setting challenging learning standards to motivate students to engage in deep learning and achieve more significant learning achievements. Finally, reverse design. Teaching activities should start from the final learning outcomes, designing courses in reverse to ensure consistency between teaching activities and learning outcomes (Li, Zhu, Liu & Xia, 2014).

By implementing these four principles, foreign language teaching can more precisely meet students' learning needs, promoting comprehensive and in-depth development. Based on these principles, to better cultivate students' critical thinking and independent learning abilities, the following reform suggestions are proposed for the classroom teaching content, teaching methods, and assessment methods of the "Integrated English" course.

5.1 Reform of Classroom Teaching Content: Combining Theory Teaching with Language Practice

Before implementing a course, it is crucial for teachers to clearly define the course's teaching objectives. According to Li (2013), establishing precise teaching goals is paramount to ensuring that the course achieves its intended teaching outcomes. Throughout the course implementation phase, teachers can engage students by introducing relevant topics, facilitating group discussions and presentations, offering constructive feedback, conducting text analyses, and assigning homework. These activities serve to continuously reinforce and enhance students' comprehensive skills, including advanced reading, discourse analysis, grammar and rhetoric, and writing abilities.

To support effective learning, teachers should provide a wealth of resources such as rich audio and video materials, electronic lesson plans, multimedia teaching tools, and diverse test questions, including those related to TEM-8. These resources are essential for fostering personalized self-learning among students and broadening their perspectives in the subject matter.

5.2 Reform of Teaching Methods: Student-Centered, Teacher-Guided Approach

Based on the OBE concept, learning should be based on cooperation rather than competition. Therefore, to achieve teaching goals, classroom teaching can adopt a blended teaching model of online and offline, dividing the class into several groups of 3-4 people, greatly saving classroom time and enhancing students' independent learning abilities. Before class, teachers can assign part of the classroom tasks, such as finding background information, analyzing text structures, and learning through MOOC, via online apps like Rain Classroom or Cloud Classroom. Group members will upload the completed results to the online app, and the teacher can choose to evaluate and record before class or require students to share and present in class, repeating this cycle until the course ends. All students' completion of online tasks can be part

of the course assessment. During class, teachers should first explain the goals of the lesson to students. Then, teachers can introduce the topic of the lesson to spark students' interest. To cultivate students' critical thinking, teachers need to thoroughly understand the course content, set questions with tight logical relationships, and provide more opportunities for group members to discuss and complete tasks together. During group discussions, teachers should pay more attention to the discussion process among group members and provide necessary guidance. In the presentation stage, if students make pronunciation or grammar errors, teachers should try not to interrupt their thoughts and maintain the completeness of students' expressions. Finally, after each lesson, teachers should organize students to reflect in groups, reflecting on the choice of language, arrangement of paragraphs, and summarizing the main ideas of each article. More importantly, teachers should also reflect on whether the actual teaching has achieved the teaching goals and continuously improve teaching methods based on the reflection results.

5.3 Reform of Assessment Methods: Process-Based Evaluation Based on Competency Assessment

The core of the OBE concept in the evaluation system is to ensure the observability and measurability of learning outcomes. Teachers should regularly conduct assessments using diversified assessment methods based on the specific abilities students need to achieve to determine whether they have met the course's competency requirements, thereby establishing a process-based evaluation system based on competency assessment. Process evaluation, as opposed to result evaluation, has a guiding nature, mainly focusing on the process results of students' ability development during teaching activities, such as the ability to solve real-world problems, and promptly judging the quality level of students' learning. While affirming achievements, it also identifies problems. According to the extent to which each student meets the educational requirements, different evaluation levels are given, ranging from unskilled to excellent, for targeted evaluation. It mainly involves four types of evaluation methods: outcome evaluation, such as course exams; process evaluation, such as classroom performance, homework checks, unit tests, and mid-term assessments; performance evaluation, such as skill assessments, case analyses,

and class presentations; and comprehensive evaluation, such as course papers.

Diversified assessment methods play a crucial role in the OBE evaluation system. It involves not only the diversity of evaluation content but also the diversity of evaluation subjects, including teacher evaluation, peer evaluation, and student self-evaluation (Chun, Guo & Wang, 2021). Teacher evaluation should be based on objectivity and fairness, providing professional feedback and guidance to students. In the peer evaluation process, teachers can assign specific tasks, such as recording micro-lessons explaining texts, and publish detailed evaluation standards through online platforms. Students can evaluate each other based on the evaluation form after watching their peers' micro-lessons. This process not only trains students' evaluation abilities but also serves as an important self-learning approach. Ultimately, the evaluation results of students will be an important reference for teacher evaluations. Student self-evaluation facilitates in-depth internalization of knowledge (Chun, Guo & Wang, 2021). Through self-reflection, students can gain a deeper understanding of learning content, discover their shortcomings, and develop improvement strategies. This "three-in-one" evaluation mechanism makes the evaluation process more comprehensive and three-dimensional. It not only exercises students in problem discovery, problem improvement, and self-reflection but also helps students form a more comprehensive self-awareness through multi-angle evaluation, promoting their overall quality improvement.

6. CONCLUSION

The OBE educational concept centers on students, achieving a shift from "teacher-led teaching" to "teacher-guided, student-active learning" (Bian, Wei, Wang, & Wang, 2020). This concept not only meets societal demands for talent but also aligns with the current requirements for cultivating English major teacher students.

As a core course for senior English majors, "Integrated English" should fully implement the OBE concept, combining theoretical teaching with practical operations, focusing on cultivating students' practical abilities and problem-solving skills. During teaching, students should be the focus, with teachers guiding and motivating students' interest and enthusiasm in learning, promoting comprehensive and in-depth development. In terms of assessment methods, competency-based

evaluation should be adopted, using process-based evaluation to comprehensively assess students' learning outcomes and competency levels. This evaluation method not only focuses on students' final grades but also values the abilities and qualities students exhibit during the learning process. This evaluation mechanism provides strong support for students' overall development by more accurately measuring their learning effectiveness.

In summary, the application of the OBE educational concept in the "Integrated English" course not only enhances the quality of English major curriculum construction but also cultivates the professional core literacy of English teacher students, laying a solid foundation for their future professional development.

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REFERENCES

[1] Bian, Q., Wei, Z., Wang, Z. D., & Wang, Z. H. Research and practice on the reform of course teaching methods based on OBE. Microcomputer Applications, 2020, (10), 7-9.

[2] Chun, L., Guo, Y., & Wang, Y. Reform and practice of postgraduate academic English teaching mode based on OBE under the background of "Double First-class"—A case study of China University of Petroleum (East China). Degree and Graduate Education, 2021, (5), 42-47.

[3] Gan, S. J. Analysis of Montessori course design and practice based on outcome-based education (OBE) mode—A case study of preschool education major in Bohai University. Journal of Bohai University (Philosophy & Social Science Edition), 2021, 43(4), 93-97.

[4] Jiang, X., & Wang, X. M. Construction of OBE teaching model for "Integrated English" based on global competence. Chinese Foreign Languages, 2023, (6), 4-10+16.

[5] Li, X. C. Research on the reform of dynamic curriculum teaching mode in higher vocational education under the OBE concept. Education and Vocation, 2013, (36), 125-127.

[6] Li, Z. Y., Zhu, H., Liu, Z. J., & Xia, Y. J. Guiding higher engineering education teaching reform with outcome-based education concept. Higher Engineering Education Research, 2014, (2), 29-34+70.

[7] Ministry of Education. Implementation opinions on the construction of first-class undergraduate courses. State Council Gazette of the People's Republic of China, 2020, (5), 57-62.

[8] Rajan, G. Outcome-based education: An open framework. Higher Education for the Future, 2020, 7(1), 1-4.

[9] Rao, N. J. Outcome-based education: An outline. Higher Education for the Future, 2020, 7(1), 5-21.

[10] Shen, T. E., & Steven, L. On the concept of outcome-based education. Higher Education Management, 2016, (5), 47-51.

[11] Spady, W. G. Outcome-based education: Critical issues and answers. American Association of School Administrators, 1994.

[12] Spady, W. G., & Marshall, K. J. Beyond traditional outcome-based education. Educational Leadership, 1991:49(2), 67.

[13] Tam, M. Outcomes-based approach to quality assessment and curriculum improvement in higher education. Quality Assurance in Education: An International Perspective, 2014: 22(2), 158-168.

[14] Tian, T. F., & Liu, R. L. Curriculum construction of teacher education majors under OBE certification concept. Journal of South China Normal University (Social Science Edition), 2022(1), 41-52+205.

[15] Zhang, N. X., Zhang, L., Wang, X. F., & Sun, J. H. Understanding OBE: Origin, core, and practical boundaries—On the paradigm shift of professional education. Higher Engineering Education Research, 2020(3), 109-115.

[16] Zhou, X., Yu, J., & Huang, C. Theoretical origins and development application of outcome-based education. Higher Education Development and Evaluation, 2021(3), 83-90+113.